# Contents of Volume 58

*Vol. 58, No. 1 May (I) 2005*

**Characterization of plant Aurora kinases during mitosis**
A. Kawabe, S. Matsunaga, K. Nakagawa, D. Kurihara, A. Yoneda, S. Hasezawa, S. Uchiyama, K. Fukui 1–13

**Differential expression of genes encoding 1-aminocyclopropane-1-carboxylate synthase in *Arabidopsis* during hypoxia**
H.-P. Peng, T.-Y. Lin, N.-N. Wang, M.-C. Shih 15–25

**Identification of phosphoproteins regulated by gibberellin in rice leaf sheath**
M.M.K. Khan, A. Jan, H. Karibe, S. Komatsu 27–40

**Mutational and expression analysis of ELIP1 and ELIP2 in *Arabidopsis thaliana***
A.P. Casazza, S. Rossini, M.G. Rosso, C. Soave 41–51

**The wheat *TaGI1*, involved in photoperiodic flowering, encodes an Arabidopsis *GI* ortholog**
X.Y. Zhao, M.S. Liu, J.R. Li, C.M. Guan, X.S. Zhang 53–64

**The Cre-*loxP* recombination-based reporter system for plant transcriptional expression studies**
T. Shigaki, R.R. Vyzasatya, A.B. Sivitz, J.M. Ward, H. Sze, K.D. Hirschi 65–73

**Molecular characterization of *PeNhaD1:* the first member of the NhaD $Na^+/H^+$ antiporter family of plant origin**
E.A. Ottow, A. Polle, M. Brosché, J. Kangasjärvi, P. Dibrov, C. Zörb, T. Teichmann 75–88

**Expression of MADS-box genes during the embryonic phase in *Arabidopsis***
M.D. Lehti-Shiu, B.J. Adamczyk, D.E. Fernandez 89–107

**Identification and characterization of AtCASP, a plant transmembrane Golgi matrix protein**
L. Renna, S.L. Hanton, G. Stefano, L. Bortolotti, V. Misra, F. Brandizzi 109–122

***Engrailed-ZmOCL1* fusions cause a transient reduction of kernel size in maize**
A.-S. Khaled, V. Vernoud, G.C. Ingram, P. Perez, X. Sarda, P.M. Rogowsky 123–139

*Vol. 58, No. 2 May (II) 2005*

**Characterization of basic *p*-coumaryl and coniferyl alcohol oxidizing peroxidases from a lignin-forming *Picea abies* suspension culture**
S. Koutaniemi, M.M. Toikka, A. Kärkönen, M. Mustonen, T. Lundell, L.K. Simola, I.A. Kilpeläinen, T.H. Teeri 141–157

**Identification of a region of the Arabidopsis *AtAOX1a* promoter necessary for mitochondrial retrograde regulation of expression**
D. Dojcinovic, J. Krosting, A.J. Harris, D.J. Wagner, D.M. Rhoads 159–175

**Comprehensive approach to genes involved in cell wall modifications in *Arabidopsis thaliana***
K. Imoto, R. Yokoyama, K. Nishitani 177–192

**Stress-induced co-expression of alternative respiratory chain components in *Arabidopsis thaliana***
R. Clifton, R. Lister, K.L. Parker, P.G. Sappl, D. Elhafez, A.H. Millar, D.A. Day, J. Whelan 193–212

**Essential amino acids of starch synthase IIa differentiate amylopectin structure and starch quality between *japonica* and *indica* rice varieties**
Y. Nakamura, P.B. Francisco Jr., Y. Hosaka, A. Sato, T. Sawada, A. Kubo, N. Fujita 213–227

**Transcriptional co-regulation of secondary metabolism enzymes in *Arabidopsis*: functional and evolutionary implications**
C.M.M. Gachon, M. Langlois-Meurinne, Y. Henry, P. Saindrenan 229–245

**Analysis of epidermis- and mesophyll-specific transcript accumulation in powdery mildew-inoculated wheat leaves**
R. Bruggmann, O. Abderhalden, P. Reymond, R. Dudler 247–267

**A protective role for the embryo surrounding region of the maize endosperm, as evidenced by the characterisation of *ZmESR-6*, a defensin gene specifically expressed in this region**
M. Balandín, J. Royo, E. Gómez, L.M. Muniz, A. Molina, G. Hueros 269–282

**Selective recruitment of *Adh* genes for distinct enzymatic functions in *Petunia hybrida***
F. Garabagi, G. Duns, J. Strommer 283–294

*Vol. 58, No. 3 June 2005*

**Relationship between allelic state of T-DNA and DNA methylation of chromosomal integration region in transformed *Arabidopsis thaliana* plants**
F.G. Masclaux, R. Pont-Lezica, J.-P. Galaud 295–303

**Immunomodulation of cucumber mosaic virus infection by intrabodies selected *in vitro* from a stable single-framework phage display library**
M.E. Villani, P. Roggero, O. Bitti, E. Benvenuto, R. Franconi 305–316

**Expression patterns of *STM*-like *KNOX* and *Histone H4* genes in shoot development of the dissected-leaved basal eudicot plants *Chelidonium majus* and *Eschscholzia californica* (Papaveraceae)**
E.P. Groot, N. Sinha, S. Gleissberg 317–331

**Two callose synthases, GSL1 and GSL5, play an essential and redundant role in plant and pollen development and in fertility**
L.C. Enns, M.M. Kanaoka, K.U. Torii, L. Comai, K. Okada, R.E. Cleland 333–349

**Organization, not duplication, triggers silencing in a complex transgene locus in rice**
G. Yang, Y.-H. Lee, Y. Jiang, S.P. Kumpatla, T.C. Hall 351–366

**Identification of differentially expressed genes in leaf and root between wheat hybrid and its parental inbreds using PCR-based cDNA subtraction**
Y. Yao, Z. Ni, Y. Zhang, Y. Chen, Y. Ding, Z. Han, Z. Liu, Q. Sun 367–384

**Defensin gene family in *Medicago truncatula:* structure, expression and induction by signal molecules**
J.N. Hanks, A.K. Snyder, M.A. Graham, R.K. Shah, L.A. Blaylock, M.J. Harrison, D.M. Shah 385–399

**Genome-wide expression profiling and identification of gene activities during early flower development in *Arabidopsis***
X. Zhang, B. Feng, Q. Zhang, D. Zhang, N. Altman, H. Ma 401–419

**OsPPR1, a pentatricopeptide repeat protein of rice is essential for the chloroplast biogenesis**
K.M. Gothandam, E.-S. Kim, H. Cho, Y.-Y. Chung 421–433

**The modified ABC model explains the development of the petaloid perianth of *Agapanthus praecox* ssp. *orientalis* (Agapanthaceae) flowers**
T. Nakamura, T. Fukuda, M. Nakano, M. Hasebe, T. Kameya, A. Kanno 435–445

*Vol. 58, No. 4 July (I) 2005*

**A *GH3*-like gene, *CcGH3*, isolated from *Capsicum chinense* L. fruit is regulated by auxin and ethylene**
K. Liu, B.-C. Kang, H. Jiang, S.L. Moore, H. Li, C.B. Watkins, T.L. Setter, M.M. Jahn 447–464

**Functional characterization of the geminiviral conserved late element (CLE) in uninfected tobacco**
C.I. Cazzonelli, J. Burke, J. Velten 465–481

**Expression of a calcineurin gene improves salt stress tolerance in transgenic rice**
X. Ma, Q. Qian, D. Zhu 483–495

**Expression profiling reveals *COI1* to be a key regulator of genes involved in wound- and methyl jasmonate-induced secondary metabolism, defence, and hormone interactions**
A. Devoto, C. Ellis, A. Magusin, H.-S. Chang, C. Chilcott, T. Zhu, J.G. Turner 497–513

**Shared molecular characteristics of successfully transformed mitochondrial genomes in *Chlamydomonas reinhardtii***
T. Yamasaki, S. Kurokawa, K.I. Watanabe, K. Ikuta, T. Ohama 515–527

**A *Colletotrichum gloeosporioides*-induced esterase gene of nonclimacteric pepper (*Capsicum annuum*) fruit during ripening plays a role in resistance against fungal infection**
M.K. Ko, W.B. Jeon, K.S. Kim, H.H. Lee, H.H. Seo, Y.S. Kim, B.-J. Oh 529–541

**Multiple hydrophobic motifs in Arabidopsis CBF1 COOH-terminus provide functional redundancy in trans-activation**
Z. Wang, S.J. Triezenberg, M.F. Thomashow, E.J. Stockinger 543–559

**Expressed sequence tags from the Yukon ecotype of *Thellungiella* reveal that gene expression in response to cold, drought and salinity shows little overlap**
C.E. Wong, Y. Li, B.R. Whitty, C. Díaz-Camino, S.R. Akhter, J.E. Brandle, G.B. Golding, E.A. Weretilnyk, B.A. Moffatt, M. Griffith 561–574

**Evidence implying only unprimed RdRP activity during transitive gene silencing in plants**
B.O. Petersen, M. Albrechtsen 575–583

***Arabidopsis* ERF4 is a transcriptional repressor capable of modulating ethylene and abscisic acid responses**
Z. Yang, L. Tian, M. Latoszek-Green, D. Brown, K. Wu 585–596

*Vol. 58, No. 5 July (II) 2005*

**Using natural variation to investigate the function of individual amino acids in the sucrose-binding box of fructan:fructan 6G-fructosyltransferase (6G-FFT) in product formation**
T. Ritsema, A. Verhaar, I. Vijn, S. Smeekens 597–607

**Comparison of transcript profiling on *Arabidopsis* microarray platform technologies**
J.D. Pylatuik, P.R. Fobert 609–624

**Comparative sequence analysis of the *Phytochrome C* gene and its upstream region in allohexaploid wheat reveals new data on the evolution of its three constituent genomes**
K.M. Devos, J. Beales, Y. Ogihara, A.N. Doust 625–641

**The *Chlamydomonas reinhardtii gtr* gene encoding the tetrapyrrole biosynthetic enzyme glutamyl-tRNA reductase: structure of the gene and properties of the expressed enzyme**
A. Srivastava, V. Lake, L.A. Nogaj, S.M. Mayer, R.D. Willows, S.I. Beale 643–658

**Generation and analysis of soybean plastid transformants expressing *Bacillus thuringiensis* Cry1Ab protoxin**
N. Dufourmantel, G. Tissot, F. Goutorbe, F. Garçon, C. Muhr, S. Jansens, B. Pelissier, G. Peltier, M. Dubald 659–668

**Pattern formation in the monocot embryo as revealed by *NAM* and *CUC3* orthologues from *Zea mays* L.**
R. Zimmermann, W. Werr 669–685

**Size does matter: Cre-mediated somatic deletion efficiency depends on the distance between the target *lox*-sites**
E.R. Coppoolse, M.J. de Vroomen, F. van Gennip, B.J.M. Hersmus, M.J.J. van Haaren 687–698

***Sorghum bicolor's* transcriptome response to dehydration, high salinity and ABA**
C.D. Buchanan, S. Lim, R.A. Salzman, I. Kagiampakis, D.T. Morishige, B.D. Weers, R.R. Klein, L.H. Pratt, M.-M. Cordonnier-Pratt, P.E. Klein, J.E. Mullet 699–720

**Microarray analysis of gene expression involved in anther development in rice (*Oryza sativa* L.)**
Z. Wang, Y. Liang, C. Li, Y. Xu, L. Lan, D. Zhao, C. Chen, Z. Xu, Y. Xue, K. Chong 721–737

**From single genes to co-expression networks: extracting knowledge from barley functional genomics**
P. Faccioli, P. Provero, C. Herrmann, A.M. Stanca, C. Morcia, V. Terzi 739–750

*Vol. 58, No. 6 August 2005*

**Functional identification of a trehalose 6-phosphate phosphatase gene that is involved in transient induction of trehalose biosynthesis during chilling stress in rice**
M.H.R. Pramanik, R. Imai 751–762

**Stable plastid transformation in lettuce (*Lactuca sativa* L.)**
C.L.C. Lelivelt, M.S. McCabe, C.A. Newell, C.B. de Snoo, K.M.P. van Dun, I. Birch-Machin, J.C. Gray, K.H.G. Mills, J.M. Nugent 763–774

**Identification of a *Nicotiana plumbaginifolia* plasma membrane $H^+$-ATPase gene expressed in the pollen tube**
B. Lefebvre, M. Arango, M. Oufattole, J. Crouzet, B. Purnelle, M. Boutry 775–787

**Alfalfa Mob1-like genes are expressed in reproductive organs during meiosis and gametogenesis**
S. Citterio, E. Albertini, S. Varotto, E. Feltrin, M. Soattin, G. Marconi, S. Sgorbati, M. Lucchin, G. Barcaccia 789–807

**The *Medicago truncatula SUNN* gene encodes a *CLV1*-like leucine-rich repeat receptor kinase that regulates nodule number and root length**
E. Schnabel, E.-P. Journet, F. de Carvalho-Niebel, G. Duc, J. Frugoli 809–822

**Conservation and divergence of FCA function between *Arabidopsis* and rice**
J.-H. Lee, Y.-S. Cho, H.-S. Yoon, M.C. Suh, J. Moon, I. Lee, D. Weigel, C.-H. Yun, J.-K. Kim 823–838

**The plant MT1 metallothioneins are stabilized by binding cadmium and are required for cadmium tolerance and accumulation**
A.M. Zimeri, O.P. Dhankher, B. McCaig, R.B. Meagher 839–855

**Two plant puroindolines colocalize in wheat seed and *in vitro* synergistically fight against pathogens**
R. Capparelli, M.G. Amoroso, D. Palumbo, M. Iannaccone, C. Faleri, M. Cresti 857–867

***hATpin*, a family of MITE-like *hAT* mobile elements conserved in diverse plant species that forms highly stable secondary structures**
S. Moreno-Vázquez, J. Ning, B.C. Meyers 869–886

**Calmodulin-like proteins from *Arabidopsis* and tomato are involved in host defense against *Pseudomonas syringae* pv. *tomato***
D. Chiasson, S.K. Ekengren, G.B. Martin, S.L. Dobney, W.A. Snedden 887–897

**Isolation and functional characterisation of two new bZIP maize regulators of the ABA responsive gene *rab28***
C. Nieva, P.K. Busk, E. Domínguez-Puigjaner, V. Lumbreras, P.S. Testillano, M.-C. Risueño, M. Pagès 899–914

**Corrigendum** 915

**Instructions for authors** 917–920

**Contents of volume** 921–925

**Author index** 927–928